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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,520	09/02/2003	Jonathon L. Kimmel	00138CIPCON(3600-360-01)	3339

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EXAMINER
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MAI, NGOCLAN THI

ART UNIT	PAPER NUMBER
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1742

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/653,520	<b>Applicant(s)</b> KIMMEL ET AL.	
	<b>Examiner</b> Ngoclan T. Mai	<b>Art Unit</b> 1742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 28-43 and 45-136 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 52-55, 126-135 is/are allowed.
- 6) ☒ Claim(s) 28-43, 45, 46 and 56-125 is/are rejected.
- 7) ☒ Claim(s) 47-51 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/12/04</u> . | 6) <input type="checkbox"/> Other: _____  |

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### **DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 104-106 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are indefinite for depended on cancel claim 44.

#### ***Claim Rejections - 35 USC § 102***

4. Claims 28-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Clarke (US 5,173,215).

Clark discloses conductive titanium suboxide particulates that meet the limitation "oxygen-reduced valve metal oxide" of claim 27 produced by crushing and grinding solid ceramic tile to an average particle size of 5 microns. See col. 7, lines 4-40. Clark also discloses particulate composition which includes particle sizes of about one micron or larger in diameter and surface area of 1.0 m<sup>2</sup>/g or even greater. See col. 9, lines 22-27.

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While Clark does not teach or suggest any ways to have satisfactory flow properties, the titanium suboxide particulates, which are in the form of powder would have some flowability and that would be within the claimed flow range. Note that the limitation "a flow of 270 mg/s or less", which covers flow rate of from more than zero to 270 mg/s.

Regarding claims 33-36: Clark does not disclose the apparent density and capacitance capability, however, it appears that the claimed properties are material properties. Consequently, the properties as recited in the instant claims would have inherently possessed by the teachings of the cited references. Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possess characteristics attributed to the claimed product. In re Spade, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990), In re Best, 195 USPQ 430 and MPEP § 2112.01.

5. Claims 28-36, 38-43, 45-46, 56-57, 59-60, 62-63, 65-66, 68-69, 71-72, 74-75, 77-78, 80-81, 83-84, 86-87, 89-90, 92-93, 95-96, 98-99, 101-102, 107-108, 110-111 are rejected under 35 U.S.C. 102(b) as being anticipated by WO98/19811

WO98/19811 discloses agglomerated of flake and angular niobium powders comprising particle having primary median particle sizes of 10.6  $\mu\text{m}$  and flow rate of 19 mg/s and agglomerated size of 300  $\mu\text{m}$  with a flow rate of 22 mg/s, page 12, line 40 to page 15, line 20. WO 98/19811 also disclose flake niobium powder having primary mean particle size of 6  $\mu\text{m}$ , agglomerate size of 300  $\mu\text{m}$ , and a flow rate of 76 mg/s and

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above, see Examples 5, 6, and 7. Note that the claimed "oxygen-reduced valve metal oxide" does not define or limit the degree of the reduction of metal oxide, hence it does not exclude the complete reduction of the metal oxide to metal. Also note that the claims are product claims and they are not limited by how they are made.

Regarding claims 29-32: these limitations are disclosed on page 5, lines 17-22.

Regarding claims 33-35: while the apparent density is not disclosed it appears the claimed property is material property. Consequently, the properties as recited in the instant claims would have inherently possessed by the teachings of the cited references. Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possess characteristics attributed to the claimed product. In re Spade, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990), In re Best, 195 USPQ 430 and MPEP § 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977)."

Regarding claim 36: this limitation is disclosed page 10, lines 3-6.

As to claims 57, 60, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 99, 102, 108, and 111: the limitation "oxygen-reduced niobium oxide has the formula  $Nb_xO_y$  where x is

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less than 2 and y is less than 2" reads on a complete reduction of niobium oxide with x is 1 and y is 0.

***Claim Rejections - 35 USC § 103***

6. Claims 28-37, 56-103, 107-125 and 136 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fife ( WO00/15555) in view of Fife et al. (WO98/19811).

Fife discloses a reduced niobium oxide having a microporous surface and primary particle size of 1 micron or less and having specific surface area and apparent density as claimed, see page 8, lines 11-123. Fife also discloses the limitations of claims 29-37 in col. 4, lines 7-48.

The difference between the powder taught by Fife and claim is that Fife does not teach powder having particle size of 1 to 10.5 microns.

However since Fife teaches the reduced niobium oxide powder whose primary particle size ranges overlap those recited by the claims; such overlapping range renders applicant's composition prima facie obvious despite difference in non-overlapping areas, see *In re Malagari*, 499 F.2d 1297, 1303, 182 USPQ 549, 553 (CCPA 1974). To distinguish over prior art, applicant needs to demonstrate (e.g. by comparative test data) that the more narrowly claimed ranges for the alloying constituents are somehow critical and productive of new and unexpected results.

Since the reduced niobium oxide is in powder form, it would have some flowability and that would be within the claimed flow range. Note that the limitation "a flow of 270 mg/s or less", which covers flow rate of from more than zero to 270 mg/s.

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With regarding claim 38-43, 45-46, 86-103, 107-125 and 136: Fife does not teach agglomerating the reduced niobium oxide powder. However it is well known the art to agglomerate niobium powder to enhance it flowability, see WO 98/19811. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the oxygen-reduced niobium powders taught by Fife by forming them into agglomerated oxygen reduced niobium powders employing the method taught by WO98/19811 for the noted improvement.


7. Claims 52-55 and 126-135 are allowable.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoclan T. Mai whose telephone number is (571) 272-1246. The examiner can normally be reached on 9:30-6:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ngoclan T. Mai  
Primary Examiner  
Art Unit 1742

n.m.